Serviceanweisung
Service manual

AUDIO

SP 120
SP 122

Diese Service-Unterlage wurde ausschließlich für autorisiertes Fachpersonal erstellt.
Für Eingriffe durch nicht autorisierte Personen übernimmt der Hersteller keine Haftung.

This service manual was only made for authorized specialists.
For interventions by not authorized persons producer doesn't take possession of liability.

Ersatzteilliste SP 122
Spare parts list SP 122

Wichtiger Bestellhinweis:

Für das Gerät SP 122 sind nur folgende Ersatzteile lieferbar:

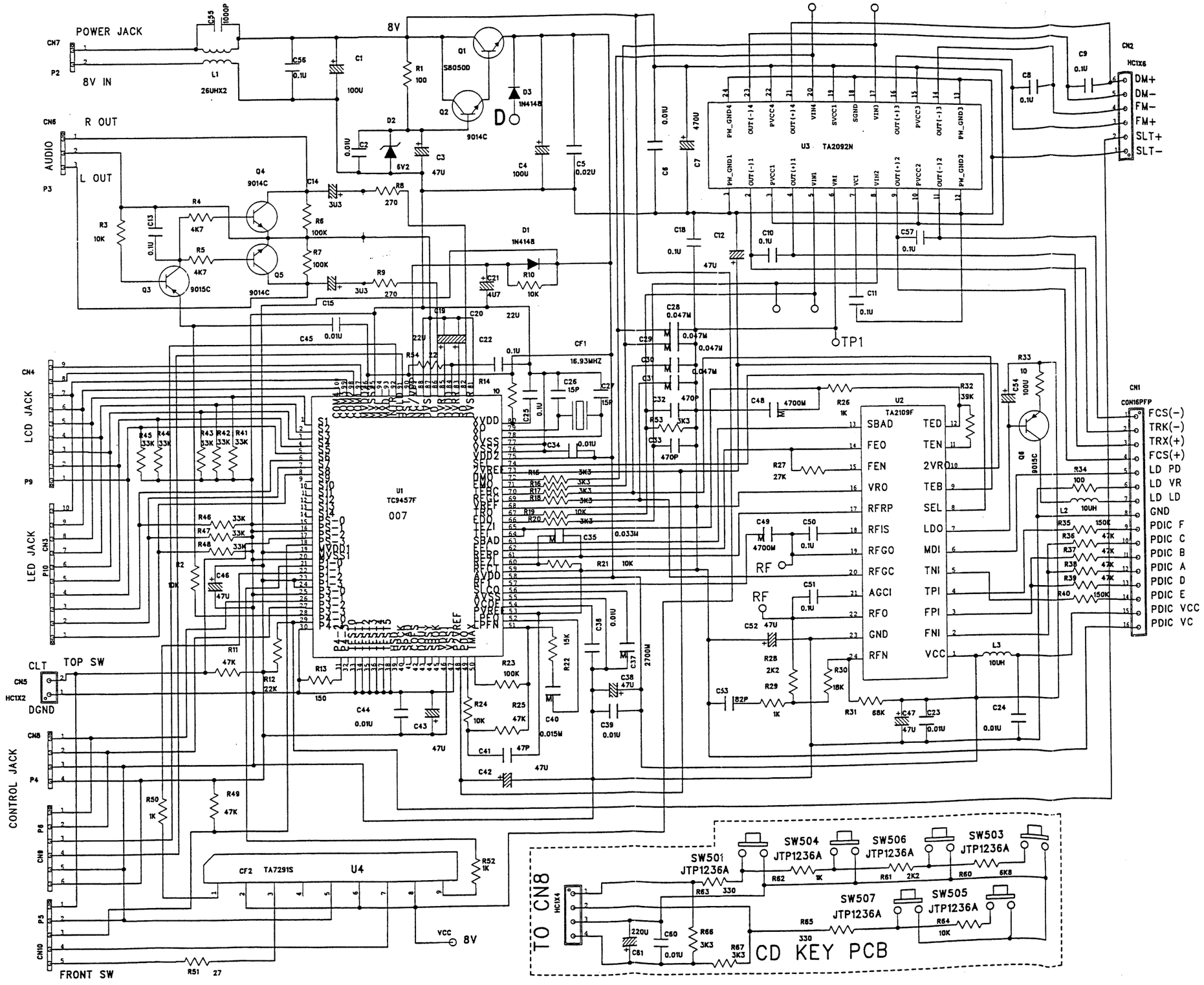
Important note for orders:

Fpr SP 122 only the following spareparts are available.

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
01 063 96	Bedienungsanleitung SP 122	Instruction manual SP 122		
01 066 90	Fernbedienungsgeber RC 163/SP 122	Remote control RC 163		C8
01 065 89	CD-Mechanik kpl. m. Deckel u. Henkel	CD mechanism		E3
01 065 93	Feder Cassettenfach	Cass door spring	6	A0
01 065 96	Knopf Netz	Knob power	39	A0
01 065 97	Knopf Eject	Knob eject	43	A1
01 066 02	Drehknopf Volume	Knob volume	41	A2
01 066 57	Tastensatz Cassette	Cass knob	10	
01 066 03	Batteriefachdeckel	Battery door	60	
01 066 04	Teleskopantenne	Rod antenna	57	
01 066 05	Netzkabel	AC Adaptor	61	
01 066 09	Lautsprecher	Speaker box	14	B0
01 044 08	IC AN 7312	IC AN 7312	IC 201	A4
01 066 12	IC AN 7148	IC AN 7148	IC 106	B0
01 062 58	IC PT 2253	IC PT 2253		

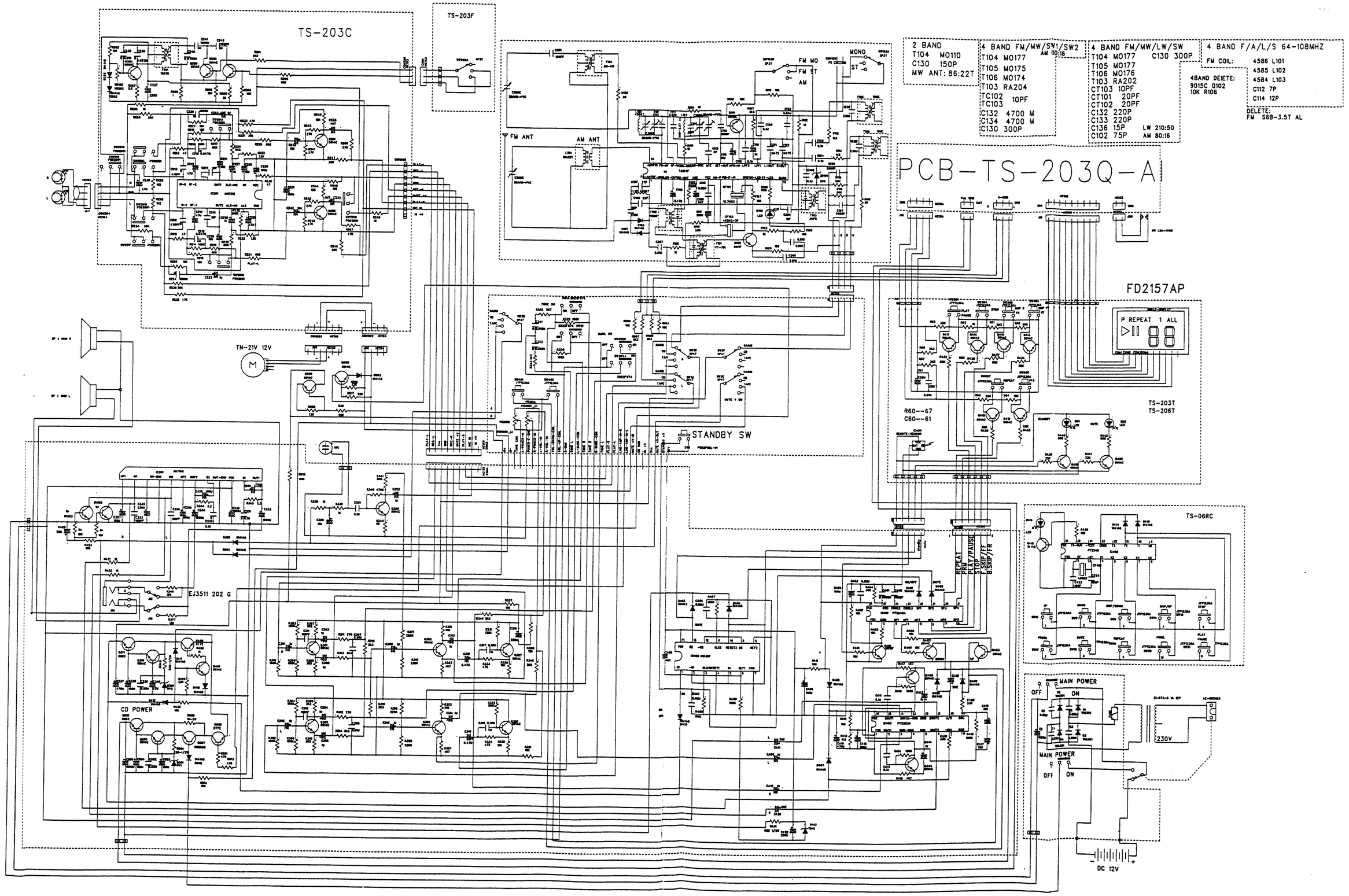
Schaltbild CD SP 120

Schematic diagram CD SP 120

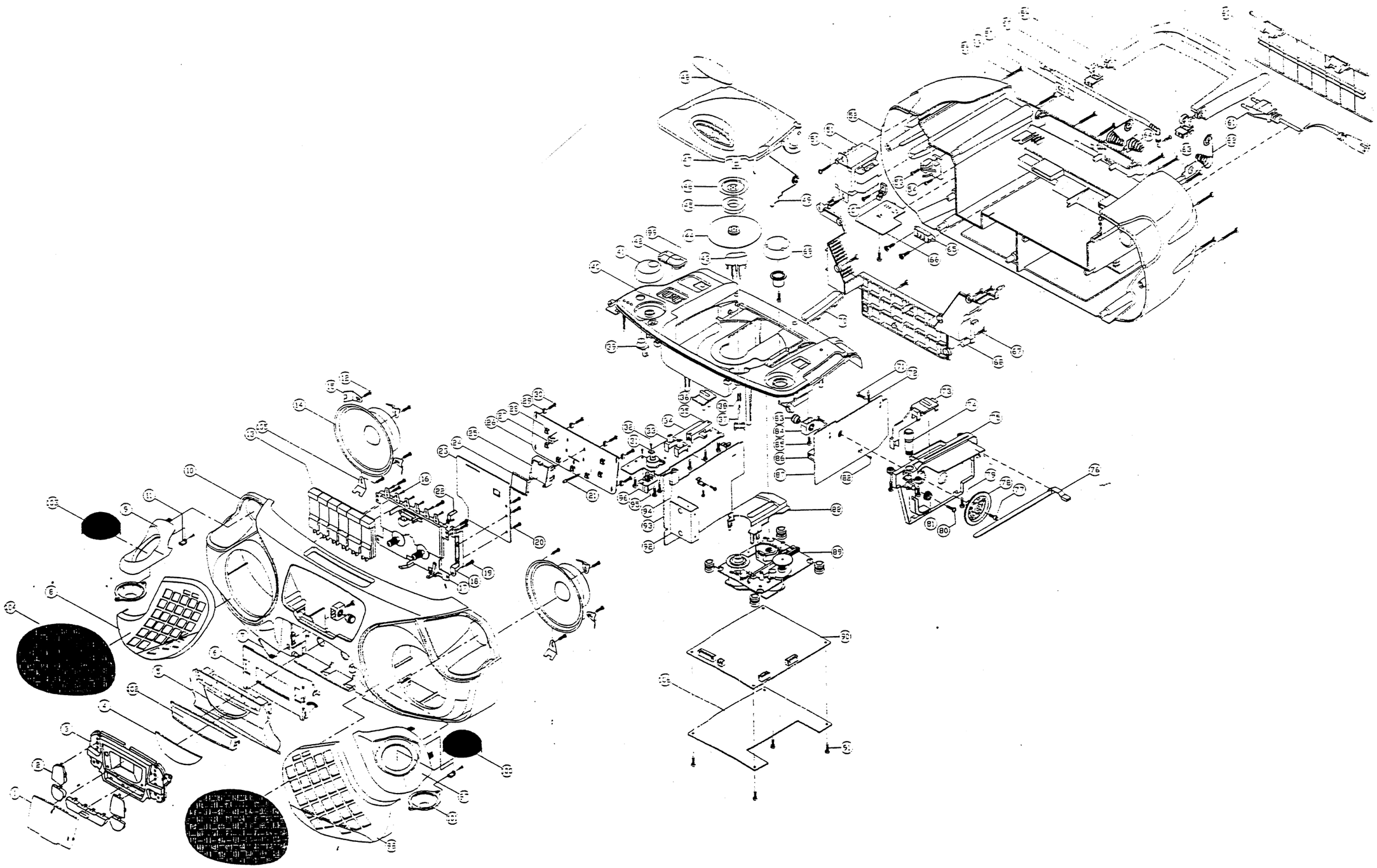


Schaltbild Grundplatine SP 120

Schematic diagram main SP 120

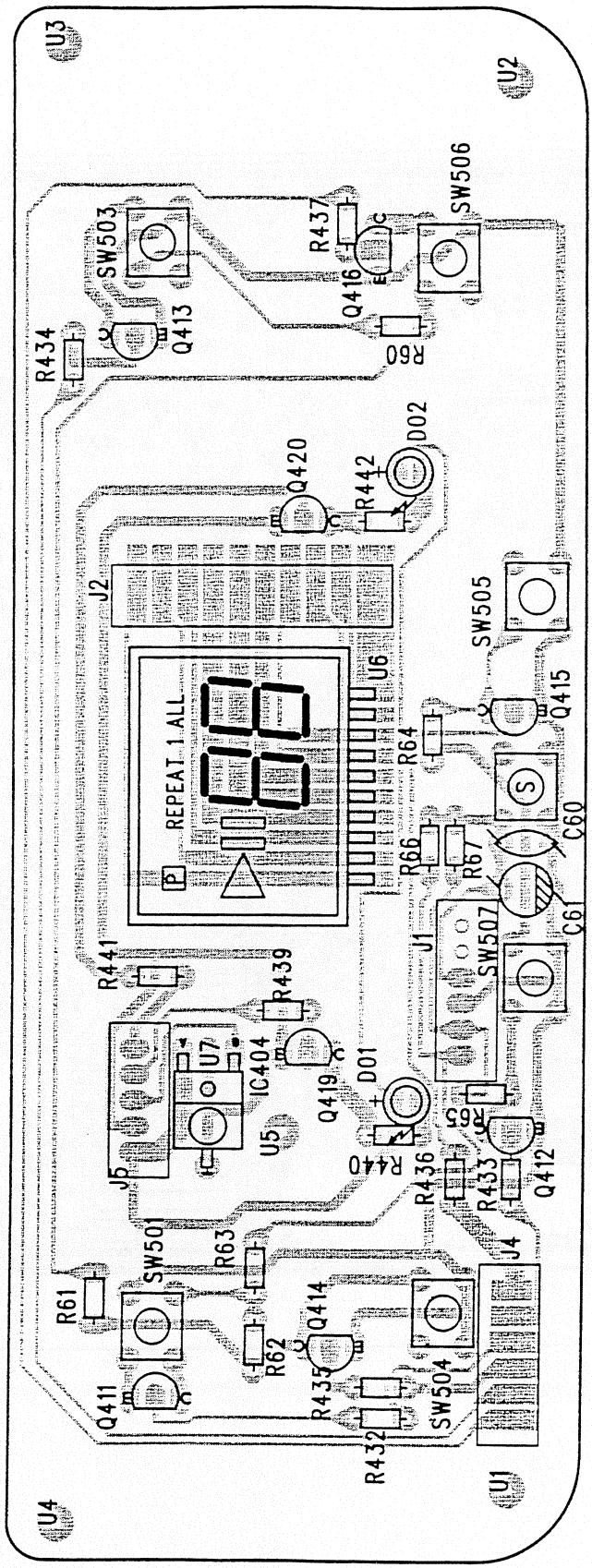


Explosionsdarstellung SP 120
Exploded view SP 120



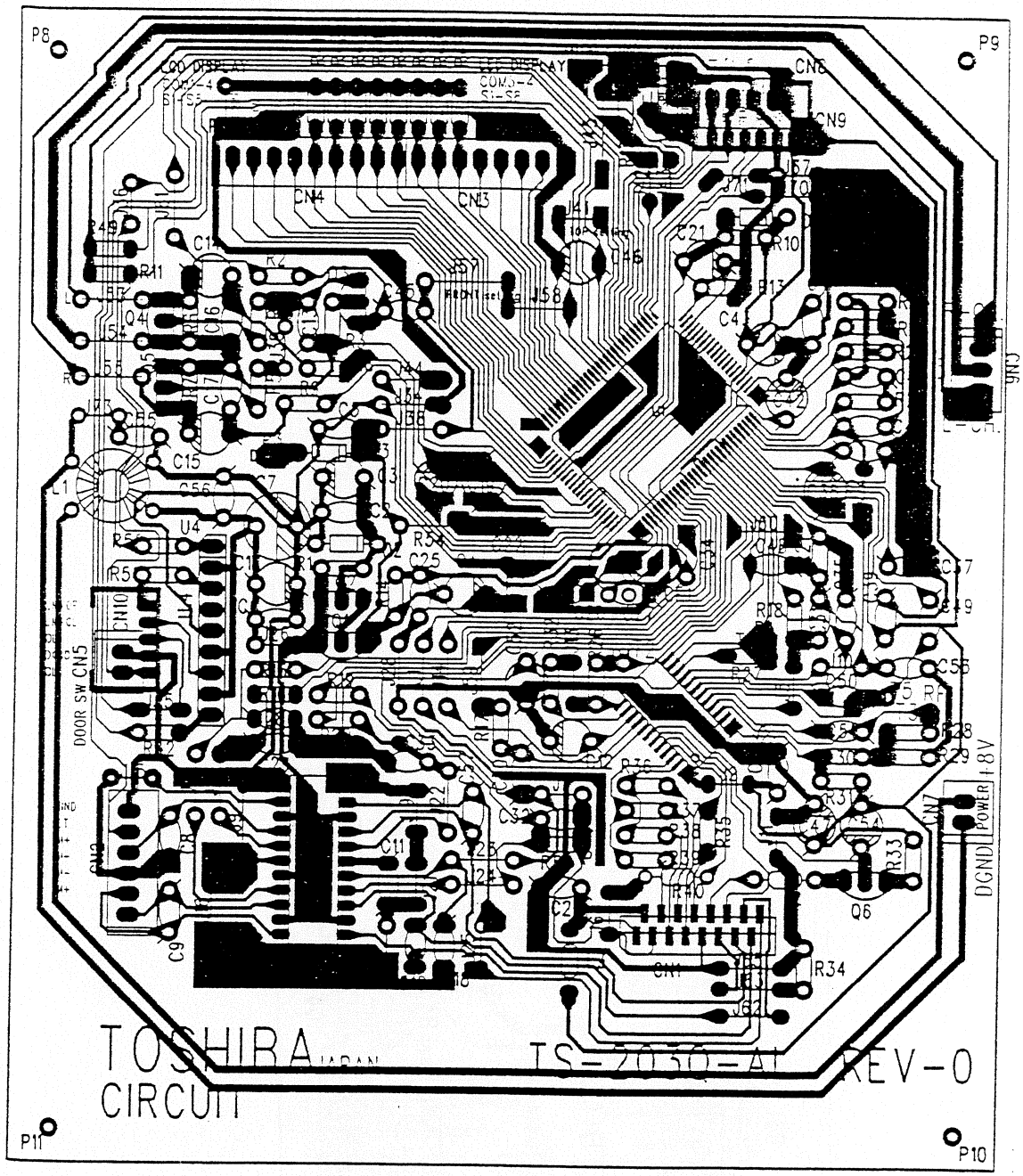
Platinendarstellung Displayplatine SP 120

P.C.B. Layout display SP 120



Platinendarstellung CD SP 120

P.C.B. Layout CD SP 120



Abgleichanweisung Tuner SP 120
Alignment procedure tuner SP 120

FM SECTION

Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
IF	IF Sweep Generator to TP-2 TP-3 Oscilloscope from TP-4 TP-5 See figure 3.	1	10.7MHz	Tuning gang Fully closed	CF101 and CF 102 Adjust for maximum sysmmetrl (10.7MHz at the center point)
		2			Repeat Step 1.
Local Oscillator (Band)	FM Signal Generator to antenna terminals (TP1,TP2) through 75 ohm antenna match network. Output Meter (VTVM) across TP6&TP7. See fig.4	3	87.35MHz (Mod.)	Tuning gang Fully closed	L103(FM OSC Coil) Adjust for max. o/p
		4	108.3MHz (Mod.)	Tuning gang Fully open	C4 (FM OSC Trimmer on of PVC) Adjust for max. o/p
		5		Repeat steps	3&4 several times
RF Amplifier (Tracking)	Same	6	90MHz (Mode.)	Tune to Sign.	L102 (FM RF Coil) Adjust for max. o/p
		7	106MHz (Mod.)	Tune to Sign	C3 (FM RF Trimmer on top of PVC) Adjust for max. o/p
		8			Repeat steps 6&7 to obtain suitable sense. at 90MHz & 106MHz

LW SECTION

Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
BAND	LW Signal Generator to antenna terminal Output Meter (VTVN) See fig.8	1	150KHz (1KHz Mod.)	Tuning gang Fully closed	T105(M0-177) LW OSC COIL adjusts for max. output.
		2	270Khz (1KHz Mod.)	Tuning gang Fully open	CT102(LW OSC Trimmer) Adjust for max. o/p
		3			Repeat steps 1 & 2
TRACKING	LW Signal Generator with loop antenna, Output Meter (VTVM). See fig.8	4	170KHz (1KHz Mod.)	Tune to signal	T102(210:50) LW Ant. Coil Adjust coils on ferrite core for max. o/p
		5	250KHz (1KHz Mod.)	Tune to signal	CT101 (LW OSC Trimmer Adjust for max. o/p
		6			Repeat steps 4&5

MW SECTION

Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
IF	AM IF Sweep generator with loop antenna. See fig.1	1	465KHz 455KHz (1Khz Mod.)	Tuning gang Fully Closed	T107(1160R) Adjust for maximum output
		2			Repeat until not further improvement can be made.
BAND	AM Signal Generator with loop antenna, Output Meter (VTVM) See fig.2	3	525KHz (1KHz Mod.)	Tuning gang Fully closed	T104(MO-177) MW OSC Coil Adjust for maximum output
		4	1650KHz (1KHz Mod.)	Tuning gang Fully open	C2(MW OSC Trimmer on the of PVC) Adjust for maximum output
		5			Repeat steps 3 & 4
TRACKING	AM Signal Generator with loop antenna. Output Meter (VTVM) See fig.2	6	600Khz (1KHz Mod.)	Tune to Signal	MW Ant. Coil T101(80:16T) Adjust coil on ferrite bar for maximum output
		7	1400KHz (1KHz Mod.)	Tune to Signal	C1(MW Ant. Trimmer of the PVC) Adjust for maximum output
		8			Repeat step 6&7 several times.

Abgleichanweisung Cassette SP 120

Alignment procedure cassette SP 120

CASSETTE SECTION

NORMAL SPEED ADJUSTMENT

1. Insert 3KHz TEST TAPE TO deck adjusts motor (VR) of motor speed calibrator to obtain the closing frequency of 3KHz that the counter.

R/P Head Azimuth

1. Set the function select switch to tape position.
2. Tune the volume control to max. output position.
3. Insert 6.3KHz or 8KHz Test into deck compartment.(TEAC MTT-113N or MTT-113CN)
4. Adjust the play back head mounting screw to obtain the max. output . Reading at VTVM.

MW SECTION

Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
IF	AM IF Sweep generator with loop antenna. See fig.1	1	450KHz (1KHz Mod.)	Tuning gang Fully Closed	T102(AT507) Adjust for maximum output
		2			Repeat until not further improvement can be made.
BAND	AM Signal Generator with loop antenna, Output Meter (VTVM) See fig.2	3	522KHz (1KHz Mod.)	Tuning gang Fully closed	T104(4123N) MW OSC Coil Adjust for maximum output
		4	1620KHz (1KHz Mod.)	Tuning gang Fully open	CT104(MW OSC) Adjust for maximum output
		5			Repeat steps 3 & 4
TRACKING	AM Signal Generator with loop antenna. Output Meter (VTVM) See fig.2	6	603KHz (1KHz Mod.)	Tune to Signal	MW Ant. Coil L104(68:20T) Adjust coil on ferrite bar for maximum output
		7	1404KHz (1KHz Mod.)	Tune to Signal	CT103(MW Ant.) Adjust for maximum output
		8			Repeat step 6&7 several times.

LW SECTION

Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
BAND	LW Signal Generator to antenna terminal Output Meter (VTVN) See fig.8	1	150KHz (1KHz Mod.)	Tuning gang Fully closed	T105(M0-177) LW OSC COIL adjusts for max. output.
		2	285KHz (1KHz Mod.)	Tuning gang Fully open	CT106(LW OSC Trimmer) Adjust for max. o/p
		3			Repeat steps 1 & 2
TRACKING	LW Signal Generator with loop antenna, Output Meter (VTVM). See fig.8	4	172KHz (1KHz Mod.)	Tune to signal	L105(210:50) LW Ant. Coil Adjust coils on ferrite core for max. o/p
		5	272KHz (1KHz Mod.)	Tune to signal	CT105 (LW OSC Trimmer Adjust for max. o/p
		6			Repeat steps 4&5

Ersatzteilliste SP 120
Spare parts list SP 120

Wichtiger Bestellhinweis:

Für das Gerät SP 120 sind nur folgende Ersatzteile lieferbar:

Important note for orders:

Fpr SP 120 only the following spareparts are available.

Best.-Nr. Part No.	Bezeichnung	Description	Pos.	Preisgruppe Price-key
01 062 03	Bedienungsanleitung SP 120	Instruction manual SP 120		
01 065 88	Fernbedienungsgeber RC 161/SP 120	Remote control RC 161		C8
01 065 89	CD-Mechanik kpl. mit Deckel u. Henkel	CD mechanism		E3
01 065 90	Cassettenmechanik kpl.	Cassette mechanism	17	C4
01 065 91	CD-Fachdeckel	CD door and deco	46+47	A8
01 065 92	Cassettenfachdeckel kpl.	Cass door and deco	4+5+102	A7
01 065 93	Feder Cassettenfach	Cass door spring	7	A0
01 065 94	Fenster Display	Display window	1	
01 065 95	Tastensatz-CD	Knob CD	2	
01 065 96	Knopf Netz	Knob power	39	A0
01 065 97	Knopf Eject	Knob eject	43	A1
01 065 98	Knopf Funktion	Knob function	36	A0
01 065 99	Knopf Surround	Knob surround	42	A0
01 066 00	Knopt Band	Knob band	73	A4
01 066 01	Drehknopf Tuning	Knob tuning	69	A2
01 066 02	Drehknopf Volume	Knob volume	41	A2
01 066 57	Tastensatz Cassette	Cass knob	13	
01 066 03	Batteriefachdeckel	Battery door	60	
01 066 04	Teleskopantenne	Rod antenna	57	
01 066 05	Netzkabel	AC Adaptor	61	
01 066 06	Netztrafo	Power transformer	51	B9
01 066 07	LCD-Display	LCD-Display		A6
01 066 08	IR-Empfänger	IR sensor	IC 104	A6
01 066 09	Lautsprecher	Speaker box	14	B0
01 066 10	IC TC 9457F-010	IC TC 9457F-010	U1	
01 066 11	IC TA 2109F	IC TA 2109F	U2	
01 048 50	IC TA 2092N	IC TA 2092N	U3	
01 044 08	IC AN 7312	IC AN 7312	IC 201	A4
01 066 12	IC AN 7148	IC AN 7148	IC 301	B0
01 066 13	IC PT 2249	IC PT 2249	IC 401	
01 043 07	IC TC 4013	IC TC 4013	IC 402	
01 062 58	IC PT 2253	IC PT 2253	IC 403	
01 066 14	IC PT 2248	IC PT 2248	IC 405	
01 066 15	Bedienteil-/Display-Platine	Display P.C.B.	26	
01 066 16	Cassetten-Platine	Cassette P.C.B.	23	
01 066 17	Tuner-Platine	Tuner P.C.B.	87	
01 066 18	Haupt-Platine	Main P.C.B.	93	
01 066 19	Faltkarton SP 120 nur Gerät	Gift box		B5
01 066 20	Faltkarton SP 120 Umkarton	Carton		A8

Abgleichanweisung Tuner SP 122
Alignment procedure tuner SP 122

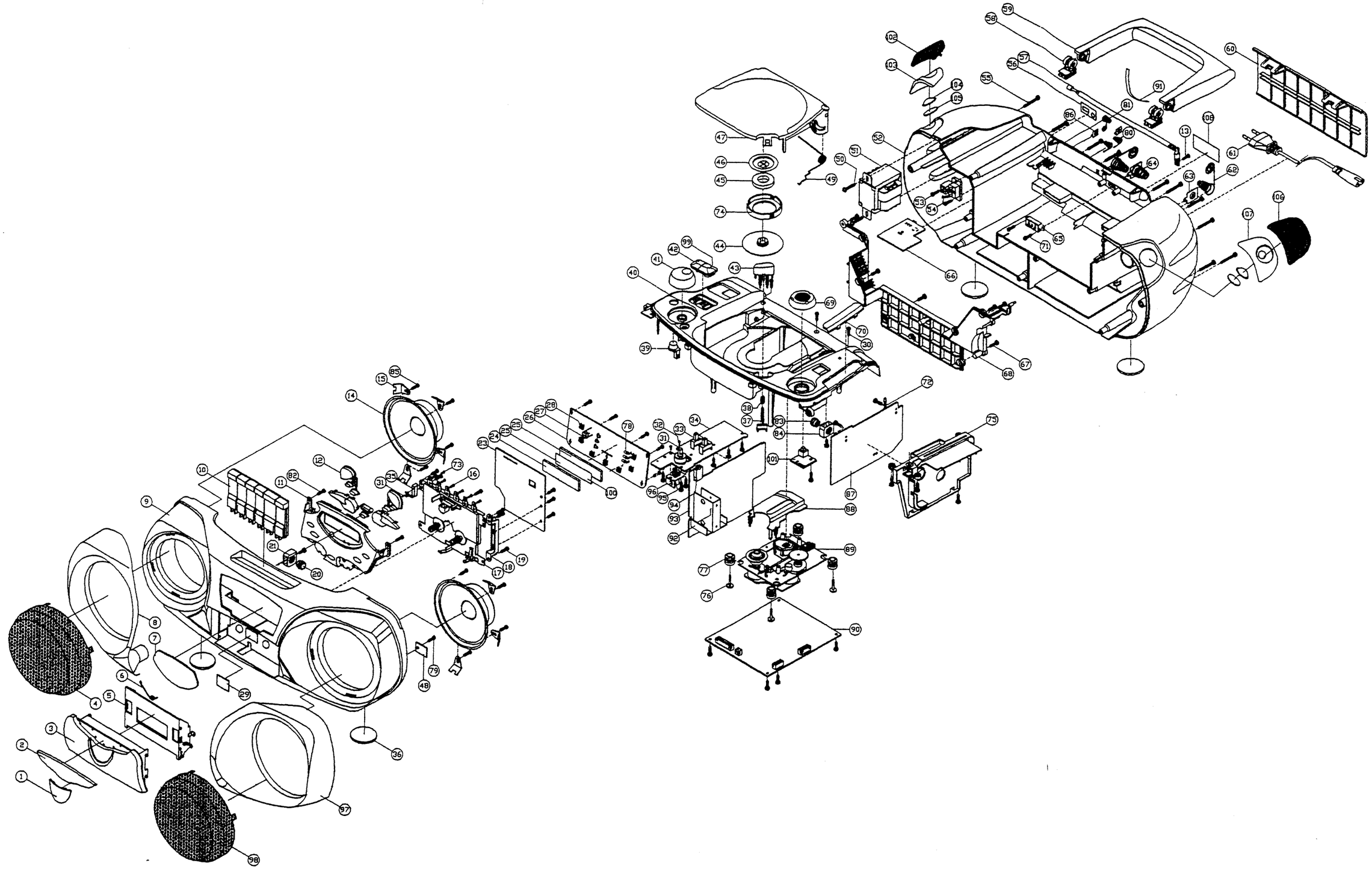
FM STEREO SECTION

Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
Local Oscillator		1			38KHz +/-30Hz
Channel Separation	FM Signal generator Mod. by stereo sign. either R or L sub..carrier and 10% pilot at 1mV RF level connected to TP1 TPG See fig.5 output meter VTVM across the speaker voice coil (4 ohm)	2	Tune to Signal		Check either one channel (R or L) output in mini. reading
					Repeat step 2.

FM SECTION

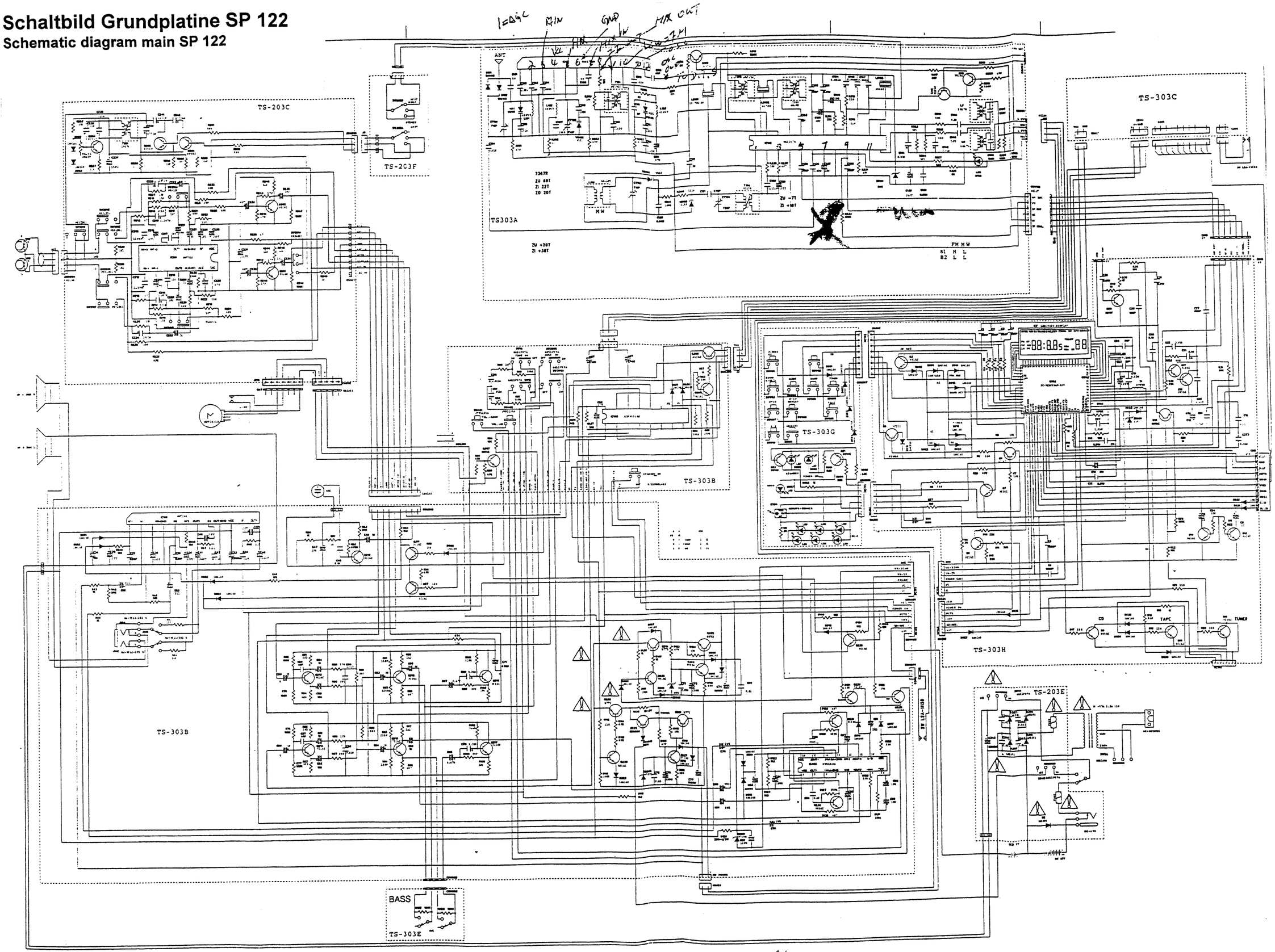
Circuit Alignment	Equipment Connection	Step	Gen. Freq.	Dial Setting	Adjustments
IF	IF Sweep Generator to TP-2 TP-3 Oscilloscope from TP-4 TP-5 See figure 3.	1	10.7MHz	Tuning gang Fully closed	T101 and T103 Adjust for maximum sysmmetrl (10.7MHz at the center point)
		2			Repeat Step 1.
Local Oscillator (Band)	FM Signal Generator to antenna terminals (TP1,TP2) through 75 ohm antenna match network. Output Meter (VTVM) across TP6&TP7. See fig.4	3	87.5 MHz (Mod.)	Tuning gang Fully closed	L103(FM OSC Coil) Adjust for max. o/p
		4	108MHz (Mod.)	Tuning gang Fully open	C111(FM OSC) Adjust for max. o/p
		5		Repeat steps	3&4 several times
RF Amplifier (Tracking)	Same	6	90MHz (Mode.)	Tune to Sign.	L102 And L101 (FM RF Coil) Adjust for max. o/p
		7	106MHz (Mod.)	Tune to Sign	CT102 And CT101 (FM RF) Adjust for max. o/p
		8			Repeat steps 6&7 to obtain suitable sense. at 90MHz & 106MHz

Explosionsdarstellung SP 122
Exploded view SP 122



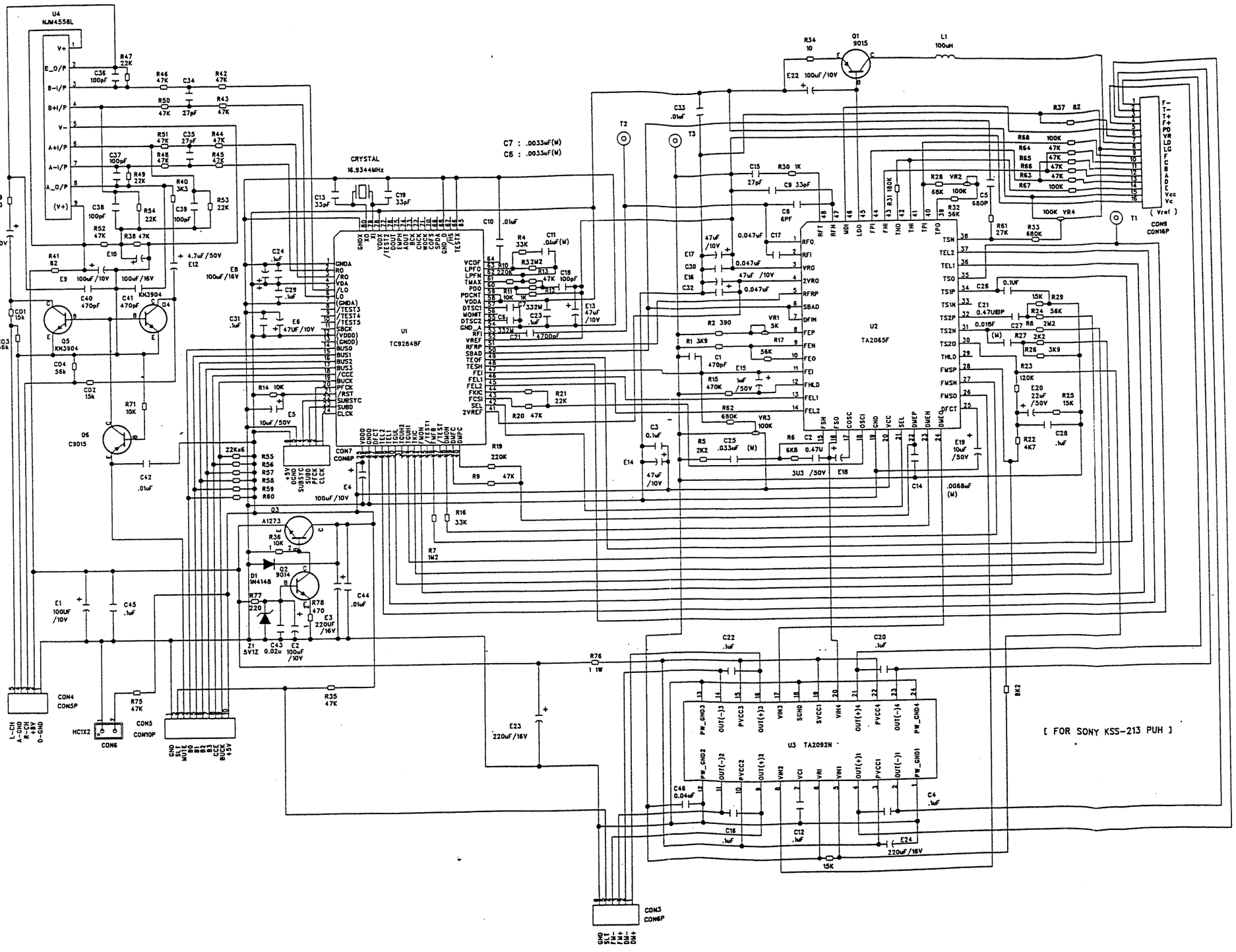
Schaltbild Grundplatine SP 122

Schematic diagram main SP 122



Schaltbild CD SP 122

Schematic diagram CD SP 122



WICHTIGER HINWEIS/IMPORTANT NOTE

Der integrierte CD-Spieler arbeitet mit unsichtbarem Laserlicht.
Nicht in den Strahl blicken und sich nicht dem Strahl aussetzen!
Vorsicht, Laserstrahlung im Inneren des Gerätes!
Zur Vermeidung von Strahlungsschäden darf das Gehäuse nur von qualifiziertem Fachpersonal geöffnet werden.
Informationsetikett auf der Geräterückseite (siehe Bild).

The integrated CD-Player works with invisible laser-light.
Do not look into this beam and don't abandon yourself to radiation.
Attention, laser-radiation also inside of the unit!
To avoid damages of radiation unit should be opened only by qualified service personnel.
Information label on the rear of unit (see picture).

VAROITUS!
Suojakoteloa ei saa avata. Laite sisältää laserdiodin, joda lähettää näkymäntöntä silmille vaarallista lasersäteilyä.

VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

LASER KLASSE 1

Laser $\lambda = 780$ nm
$P_{max} = 0{,}5$ mW

CLASS 1
LASER PRODUCT

Laser $\lambda = 780$ nm
$P_{max} = 0{,}5$ mW

LUOKAN 1 LASERLAITE

KLASS 1 LASER
APPARAT

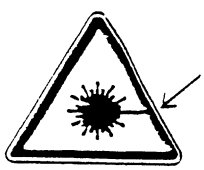
Warnetikett in dem Plattenfach (siehe Bild).

Warning label in record-drawer (see picture).

UNSICHTBARE LASERSTRAHLUNG
NICHT DEM STRAHL AUSSETZEN
LASER KLASSE 3 B

CAUTION
INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

ADVARSAL:
Usynlig laserstråling ve åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.



Austrittsöffnung für Laserstrahlung
Discharge orifice for Laser radiation

Hinweis für Original-Etikett:
Schrift und Umrandung schwarz. Untergrund gelb.

Indication for original label:
Letters and surrounding black, background yellow.

Bitte bei Ersatzteilbestellung die genaue Bezeichnung und **Ident-Nr. (siehe Typenschild)** des Gerätes sowie Bestell-Nummer und Positions-Nummer des Ersatzteils angeben.

For ordering of spare parts please state exact description and **ident.-no. of unit (see silver rating label on the backside of unit)** as well as part no. and position no. of required spare parts.

Benutzen Sie:

Telefax: 0 82 45 / 5 13 26

oder

ersatzteile@schneider-ag.de

Der Umwelt zuliebe!

Diese Serviceanweisung wurde auf chlorfrei gebleichtem Papier gedruckt.

Working for the environment!

This service manual is printed on paper whitened without chlorine.

Technische Änderungen vorbehalten.
Technical modifications reserved.